IN THE CLAIMS:

Please amend the claims as follows:

Claims 1-56 (canceled).

57. (currently amended) A non-human, mammalian embryo clone of a pre-existing, non-embryonic mammal from which a differentiated cell has been taken,

~~wherein the embryo clone has the same set of chromosomes as the pre-existing mammal,~~

wherein the embryo clone is produced by a process comprising:

(a) transferring the nucleus of the differentiated cell or a cell obtained by culture thereof into an enucleated, metaphase II-arrested oocyte from the same species,

wherein the differentiated cell or cell obtained by culture thereof is a diploid cell in the G1 phase of the cell cycle at the time of transfer;

(b) activating the oocyte; and

(c) incubating the activated oocyte such that the embryo clone develops,

wherein the embryo clone is capable of developing to term.

58. (previously presented) The non-human, mammalian embryo clone of claim 57, wherein the non-human, non-embryonic mammal is selected from the group consisting of cattle, sheep, pigs, goats, mice, and rabbits.

59. (previously presented) The non-human, mammalian embryo clone of claim 57, wherein the differentiated cell or cell obtained by culture thereof is cultured *in vitro.*

60. (previously presented) The non-human, mammalian embryo clone of claim 58, wherein the differentiated cell or cell obtained by culture thereof is abstracted *ex vivo.*

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61. (currently amended) A non-human mammalian clone of a pre-existing, non-embryonic mammal from which a differentiated cell has been taken,

~~wherein the clone has the same set of chromosomes as the pre-existing mammal,~~

wherein the clone is produced by a process comprising:

(a) transferring the nucleus of the differentiated cell or a cell obtained by culture thereof into an enucleated, metaphase II-arrested oocyte from the same species,

wherein the differentiated cell or cell obtained by culture thereof is a diploid cell in the G1 phase of the cell cycle at the time of transfer;

(b) activating the oocyte; and

(c) incubating the activated oocyte such that an embryo develops;

(d) transferring the embryo to a female of the same species; and

(e) developing the embryo into the non-human mammalian clone.

62. (previously presented) The non-human mammalian clone of claim 61, wherein the non-human, non-embryonic mammal is selected from the group consisting of cattle, sheep, pigs, goats, mice, and rabbits.

63. (previously presented) The non-human mammalian clone of claim 61, wherein the differentiated cell or cell obtained by culture thereof is cultured *in vitro*.

64. (previously presented) The non-human mammalian clone of claim 61, wherein the differentiated cell or cell obtained by culture thereof is abstracted *ex vivo*.

65. (currently amended) A non-human, transgenic mammal ~~mammalian embryo clone of a pre-existing, non-embryonic mammal from which a differentiated cell has been taken~~,

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wherein the embryo clone is produced by a process comprising:

(a) obtaining ~~the~~ a differentiated cell from ~~the~~ a pre-existing, non-human, non-embryonic mammal;

(b) genetically modifying the differentiated cell;

(c) transferring the nucleus of the genetically modified cell into an enucleated, metaphase II-arrested oocyte from the same species,

wherein the differentiated cell or cell obtained by culture thereof is a diploid cell in the G1 phase of the cell cycle at the time of transfer;

(d) activating the oocyte; and

(e) incubating the activated oocyte such that the ~~embryo clone~~ transgenic mammal develops,

wherein the ~~embryo clone~~ transgenic mammal is capable of developing to term.

66. (currently amended) The non-human, ~~mammalian embryo clone~~ transgenic mammal of claim 65, wherein the non-human, non-embryonic mammal is selected from the group consisting of cattle, sheep, pigs, goats, mice, and rabbits.

67. (currently amended) A non-human, transgenic mammal ~~mammalian clone of a pre-existing, non-embryonic mammal from which a differentiated cell has been taken~~,

wherein the clone is produced by a process comprising:

(a) obtaining ~~the~~ a differentiated cell from ~~the~~ a pre-existing, non-human, non-embryonic mammal;

(b) genetically modifying the differentiated cell;

(c) transferring the nucleus of the genetically modified cell into an enucleated, metaphase II-arrested oocyte from the same species,

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wherein the differentiated cell or cell obtained by culture thereof is a diploid cell in the G1 phase of the cell cycle at the time of transfer;

(d) activating the oocyte; and

(e) incubating the activated oocyte such that an embryo develops;

(f) transferring the embryo to a female of the same species; and

(g) developing the embryo to term ~~into the non-human mammalian clone~~.

68. (currently amended) The non-human ~~mammalian clone~~ , transgenic mammal of claim 67, wherein the non-human, non-embryonic mammal is selected from the group consisting of cattle, sheep, pigs, goats, mice, and rabbits.

69. (currently amended) A non-human, non-embryonic mammal from which a differentiated donor cell has been taken and a clone ~~thereof~~ of the non-human mammal produced from the cell,

wherein ~~the clone has the same set of chromosomes as the non-human mammal and wherein~~ the clone is made by a process comprising:

(a) transferring the nucleus of the differentiated cell or a cell obtained by culture thereof into an enucleated, metaphase II-arrested oocyte of the same species,

wherein the differentiated cell or cell obtained by culture thereof is a diploid cell in the G1 phase of the cell cycle at the time of transfer;

(b) activating the oocyte; and

(c) incubating the activated oocyte such that an embryo develops;

(d) transferring the embryo to a female of the same species; and

(e) developing the embryo to term ~~into a clone that has the same set of chromosomes as the non-human mammal~~.

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70. (currently amended) A cell preparation ~~culture comprising non-human mammalian differentiated cells~~ and a ~~non-human mammalian~~ clone of a non-human mammal produced from a cell in the cell preparation ~~therefrom~~, ~~wherein the clone has the same set of chromosomes as cells in the cell culture,~~

wherein the cell preparation comprises differentiated cells from a non-human mammal,

and wherein the clone is made by a process comprising:

(a) transferring the nucleus of a differentiated cell from the cell preparation ~~culture~~ into an enucleated, metaphase II-arrested oocyte of the same species,

wherein the differentiated cell is a diploid cell in the G1 phase of the cell cycle at the time of transfer;

(b) activating the oocyte; and

(c) incubating the activated oocyte such that an embryo develops;

(d) transferring the embryo to a female of the same species; and

(e) developing the embryo to term ~~into a clone that has the same set of chromosomes as cells in the cell culture~~.

71. (previously presented) A reconstituted non-human mammalian oocyte comprising the nucleus of a differentiated non-human mammalian diploid donor cell from the same species in the G1 phase of the cell cycle,

wherein the reconstituted non-human mammalian oocyte is capable of developing to term.

72. (new) A cell preparation and a live-born clone of a non-embryonic, non-human mammal,

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wherein the clone is produced from a cell in the preparation, and

wherein the cell preparation comprises differentiated cells from the non-embryonic, non-human mammal.

73. (new) The cell preparation and clone according to claim 72, wherein the mammal is a sheep.

74. (new) The cell preparation and clone according to claim 72, wherein the mammal is a pig.

75. (new) The cell preparation and clone according to claim 72, wherein the mammal is a goat.

76. (new) The cell preparation and clone according to claim 72, wherein the mammal is a mouse.

77. (new) The cell preparation and clone according to claim 72, wherein the mammal is a rabbit.

78. (new) The cell preparation and clone according to claim 72, wherein the mammal is a cow.

79. (new) A cell preparation and a clone of a non-embryonic, non-human mammal,

wherein the clone is produced from a cell in the preparation,

wherein the cell preparation comprises differentiated cells from the non-embryonic, non-human mammal, and

wherein the clone is capable of developing to term.

80. (new) The cell preparation and clone according to claim 79, wherein the mammal is a sheep.

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81. (new) The cell preparation and clone according to claim 79, wherein the mammal is a pig.

82. (new) The cell preparation and clone according to claim 79, wherein the mammal is a goat.

83. (new) The cell preparation and clone according to claim 79, wherein the mammal is a mouse.

84. (new) The cell preparation and clone according to claim 79, wherein the mammal is a rabbit.

85. (new) The cell preparation and clone according to claim 79, wherein the mammal is a cow.

86. (new) A pair of live-born, non-human mammals comprising a parental non-human mammal and its offspring clone.

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